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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/758,945

01/16/2004

Michael L. Babala

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6176

46582

7590

01/22/2008

MACMILLAN, SOBANSKI & TODD, LLC

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TOLEDO, OH 43604

EXAMINER

ZANELLI, MICHAEL J

ART UNIT

PAPER NUMBER

3661

MAIL DATE

DELIVERY MODE

01/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/758,945

Applicant(s)

BABALA ET AL.

Examiner

Michael J. Zanelli

Art Unit

3661

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 12-28 and 30-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-28, 32-34 and 39 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 8, 10, 12-19, 24 and 37 is/are rejected.
- 7) ☒ Claim(s) 3-6, 20-23, 30, 31, 35, 36, 38 and 40-47 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/7/07
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This is responsive to the amendment filed 12/7/07. Claims 1-8, 10, 12-28 and 30-47 are pending.
2. The IDS filed 12/7/07 has been considered. Note the name provided for the cited patent number is incorrect.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-8, 10, 12-24, 30, 31, 35-38 and 40-47 are objected to because of the following informalities:
 - A. As per claim 1, at line 4 insert --first-- before "circuit" (second occurrence) to avoid confusion with the second circuit substrate. At line 11 change "motions" to --motion--.
 - B. As per claim 17, at line 5 insert --first-- before "circuit" (second occurrence) to avoid confusion with the second circuit substrate. At line 13 change "motions" to --motion--.
 - C. As per claim 36, at line 5 insert --first-- before "circuit" (second occurrence) to avoid confusion with the second circuit substrate.
 - D. As per claim 41, at line 5 insert --first-- before "circuit" (second occurrence) to avoid confusion with the second circuit substrate.
 - E. All claims depending from an objected base claim are also objected to as containing the same deficiencies.

5. Claims 7, 8, 17 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. As per claim 7, the claim is unclear which circuit substrate (first or second) is being referred to at line 2.

B. As per claim 8, the claim is unclear as recited at lines 3-4. It is believed the word --sensor-- should have been inserted after "motion" at line 3.

C. As per claim 17, at lines 9-10 "said motion sensors" lacks antecedence.

D. As per claim 37, the claim is unclear which circuit substrate (first or second) is being referred to at line 2.

E. All claims depending from a rejected base claim are also rejected as containing the same deficiencies.

6. Claims 1, 2, 8, 10, 12-16, 18, 19 and 24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 98/43470.

A. As per claim 1, WO 98/43470 discloses a control unit for a vehicle system comprising a housing to be mounted in a vehicle, electronic components mounted within the housing and at least one motion sensor mounted within the housing and electrically connected to the electronic components for controlling a vehicle system whereby the motion sensor generates data relative to at least one reference axis of the vehicle (page 4, lines 7-13). The claim has been amended to include a first and second substrate mounted within the housing whereby electronic components are mounted on the first substrate and the second substrate mounted generally perpendicular to and upon the first substrate. The

motion sensor is mounted upon the second substrate. However, WO 98/43470 further discloses a primary ("first") substrate and a secondary ("second") substrate mounted within the housing and that the motion sensor is mounted upon the second substrate. The secondary substrate may be mounted upon the primary substrate and arranged generally perpendicular thereto (page 4, lines 14-24). The primary substrate is characterized as part of a control module and thus would have necessarily included electronic components used to perform control functions based in part on input from the motion sensor. Alternatively, one of ordinary skill in the art would have recognized that support circuitry would have been required to process the motion sensor signals to generate control signals used in anti-lock braking or traction control (see page 4, lines 25-27).

B. As per claim 2, WO 98/43470 is applied as above whereby the document describes a control unit comprising at least one motion sensor mounted in the housing. Claim 2 differs in that a plurality of motion sensors are mounted within the housing. However, WO 98/43470 does discuss providing motion sensors for a plurality of vehicle reference axes based upon the vehicle system to be controlled (see page 12, line 23 to page 13, line 4). One of ordinary skill in the art of vehicle control systems would have found it obvious to apply the general teachings of WO 98/43470 to vehicle control systems requiring a plurality of motion sensors. Mounting more than one motion sensor in the same housing as the electronic components would have yielded the same advantages as disclosed for a single sensor (see page 4, lines 1-6).

- C. As per claim 8, as above whereby the secondary substrate is arranged at a predetermined angle relative to the primary substrate and aligned such that the motion sensor is aligned with a vehicle reference axis (page 4, lines 7-24).
- D. As per claim 10, as above whereby the control module would have necessarily been provided with electrical connection means to communicate the control signals to the system to be controlled (i.e., brakes/traction control systems) (page 4, lines 25-27).
- E. As per claims 12-15 and 24, as above whereby one of ordinary skill in the vehicle control arts would have recognized that a vehicle incorporates a plurality of control systems (i.e., brakes, engine, suspension, steering, etc.) which interact and share sensor/control information such that the vehicle operates in an optimum and safe manner. The physical location of the control unit would have been determined based on the design and construction of the vehicle and its related control systems.
- F. As per claim 16, as above whereby the vehicle reference axes are necessarily perpendicular to one another (see page 4, lines 25-27).
- G. As per claims 18 and 19, as noted above the physical location and mounting of the control unit would have been determined based on the design and construction of the vehicle and its related control systems.
7. Claims 25-28, 32-34 and 39 are allowed.
8. **REMARKS**
- A. Applicant's amendments to claim 1 are not deemed to distinguish over WO 98/43470 insofar as page 4, lines 14-24 disclose the added claim language.

- B. The new rejections of various ones of the dependent claims in view of WO 98/43470 are the result of applicant changing their dependencies and broadening their scope (i.e., intervening claims were eliminated).
9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Zanelli whose telephone number is (571) 272-6969. The examiner can normally be reached on Monday-Thursday 9:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J. Zanelli/
Primary Examiner
Art Unit 3661